

Title (en)  
AUTHENTICATION OF DOCUMENTS HAVING A MAGNETIC STRIPE

Title (de)  
AUTHENTIFIZIERUNG VON DOKUMENTEN MIT EINEM MAGNETSTREIFEN

Title (fr)  
AUTHENTIFICATION DE DOCUMENTS PORTANT UNE BANDE MAGNÉTIQUE

Publication  
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Application  
**EP 09828284 A 20091120**

Priority

- US 2009065303 W 20091120
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- US 27621208 A 20081121
- US 27622708 A 20081121
- US 27609508 A 20081121

Abstract (en)  
[origin: WO2010059929A2] Methods, systems, and apparatus for efficiently authenticating a document (e.g. a credit card) having a magnetic stripe are provided. The magnetic field at different points of the magnetic stripe are measured, e.g., by a checkout scanner to create a magnetic signature. Digital samples of the measurements may be transformed into coefficients of continuous basis functions, e.g., a Fourier transform. These coefficients are then compared to reference values (e.g. corresponding coefficients) to produce a measure of the authenticity of the document. The number of coefficients used can advantageously be smaller than the number of digital samples without compromising accuracy, thus using less bandwidth between a scanner and an authentication entity. The reference values can be updated over time to reflect changes in the magnetic stripe of the authentic document, as may occur due to physical deterioration. For example, reference values may be optimized based on recent measurements of the authenticated document to provide a more accurate determination of authenticity for future measurements. Methods, systems, and apparatus for verifying the identity of a cardholder are also provided. A digital representation of a magnetic characteristic of a magnetic stripe of the card can be stored on a portable electronic device of the cardholder. During a transaction, the digital signature is then transmitted so that it can be compared with a reference signature. The identity may be verified, and a response sent to a party requesting the verification, e.g., during a transaction between the requesting party and the verified party.

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